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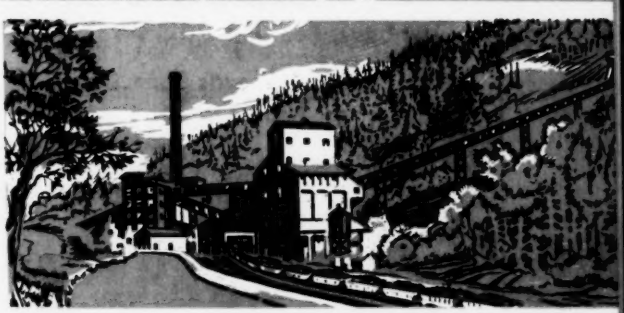

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CONTENTS FOR JANUARY, 1954

Irrigation Begins in the Columbia Basin Project. By R. S. Funderburk 1

Dr. Funderburk is Associate Professor of Geography, Central Washington College of Education, Ellensburg. After earning his Doctorate at George Peabody College for Teachers, he became quite active in organizations in Washington and in the National Council of Geography Teachers. He at present is Washington State Coordinator and a member of of the Committee on Tests.

Some Tests for First Grade Geography. By Ethel Pace 11

Miss Pace has many years of experience teaching in the primary grades. Two recent articles by her in the JOURNAL are "A Miniature Rock Garden: A First Grade Project," February, 1953 and "Construction Activity Follows a Field Trip," April, 1953.

Is There an Antarctic Ocean? By Thomas Frank Barton 14

Dr. Thomas Frank Barton is lecturer and administrative supervisor of Elements of Geography, an introductory course at Indiana University.

A Seventh Grade Approach to the Study of a Geography of Germany. By J. Bernard Ray 17

Mr. Ray has been teaching seventh and eighth grade geography for the past two years in the Freeport Area High School, Freeport, Pennsylvania. He took his undergraduate work at State Teachers College, Indiana, Pennsylvania, and is now working toward a Master's degree in geography at the University of Pittsburgh.

Student Interest Appeals in Early Geography Textbooks. By John R. Sahli 20

Dr. Sahli took his undergraduate work at Geneva College, Beaver Falls, Pennsylvania, and holds the M.Ed., M.A. and Ph.D. degrees from the University of Pittsburgh. He is a member of the Social Studies Department, State Teachers College, Indiana, Pennsylvania.

Adequate Teaching of Geography and History Requires Separate Courses. By Raus M. Hanson 25

Dr. Hanson is Professor of Geography and Geology, Madison College, Harrisonburg, Virginia. He is active in many local, state and national organizations promoting better geography teaching. "Possible Outline for Studying Geography of a Country" appeared in the January, 1953 issue of the JOURNAL OF GEOGRAPHY.

Ellen Churchill Semple: Her Geographical Approach to American History. By Lawrence Gelfand 30

Mr. Gelfand is a teaching fellow in history at the University of Washington. He has taken graduate work in geography at both Western Reserve University and at Washington.

State Coordinators of National Council of Geography Teachers. By Mamie L. Anderzhon 42

Geographical Publications 43

Books and Pamphlets Received 47

Contents of the JOURNAL are indexed regularly in the *Educational Index to Periodicals*.
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VOLUME LIII JANUARY 1954 NUMBER 1

IRRIGATION BEGINS IN THE COLUMBIA BASIN PROJECT

R. S. FUNDERBURK
Central Washington College of Education

A certain glamour attaches itself to any irrigation enterprise. The Columbia Basin Project, abounding as it does in superlatives, has captured the public imagination to an unusual degree. As part of a multi-purpose program, the irrigation project is tied in with the world's largest man-made structure, Grand Coulee Dam. The dam impounds the world's longest man-made lake, which helps to control floods on the Columbia River as well as store water for irrigation and for the world's greatest hydro-electric plant. From Lake Roosevelt, water is pumped 280 feet to the equalizing reservoir in the Grand Coulee, the geological history of which is intriguing. The completed project calls for distribution of water to 1,029,000 acres of desert land (Fig. 1).

The first large scale irrigation farming in the Columbia Basin Project began in 1952. A small beginning had been made in 1948, with water pumped from the Columbia River to about 5,000 acres in the vicinity of Pasco. The large and increasing acreage now coming "under ditch" is receiving water from the reservoir impounded in the Grand Coulee (Fig. 2). According to the tentative "Seven Year Program" now being followed, about 70,000 acres will be made irrigable each year from 1952 thru 1958.

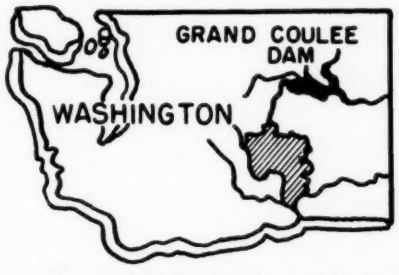


FIG. 1. Regional setting of the Columbia Basin Project. The completed project will include slightly more than 1,000,000 acres of arable land.

While a great deal has been written about the project, some of its features which may be of interest to teachers of geography are overlooked in most of the articles

which have been published. This paper deals with seven problems of the "down to earth" variety: 1. setting up farm units; 2. getting settlers on the land; 3. domestic water supply; 4. what crops to grow; 5. soil problems; 6. paying for the project; 7. impact of the project on service facilities—roads, schools and market centers.

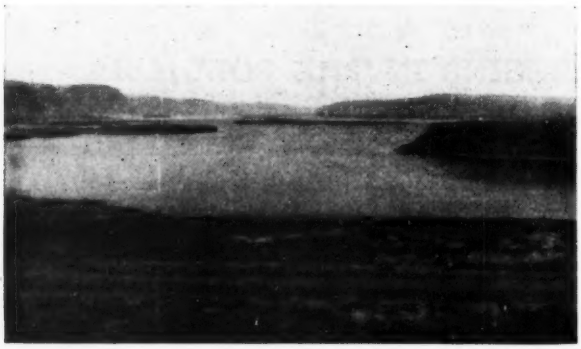


FIG. 2. View of the equalizing reservoir which has been impounded in the Grand Coulee. Water from this reservoir was first used for irrigation in 1952.

SETTING UP FARM UNITS

When the project was authorized, practically the entire area included was being used extensively, if at all. The limited grass and other vegetation supported some grazing of sheep and cattle. More favored areas were in wheat production, with dry farming. A shift from these forms of land use to intensive agriculture under irrigation makes necessary the creation of much smaller operating units than those in existence.

Size of the farm units in the Columbia Basin Project was limited by federal law. The Columbia Basin Act, 1943, states as its purpose to "establish farm units of sufficient acreage for the support of an average-sized family at a suitable level of living." The minimum was set at 10 acres, the maximum at 160.

Within these limits, land classification is the basic factor in determining the size of farm units. The Bureau of Reclamation classified land in the Columbia Basin Project as 1, 2, 3 or 6. Class 1 is the best land. The soil is at least 30 inches deep, is a sandy loam or loamy sand with a permeable subsoil and has a slope of less than five per cent. There is no appreciable rock in the plow zone, and there is no drainage problem. Class 2 is land of intermediate quality. The soil is 20 inches deep, loamy sand and has a slope between five and ten per cent. Class 3 land has a soil depth of from 12 to 20 inches and is sandy loam over a permeable subsoil. The slope of class 3 land ranges from 10 to 15 per cent. The letters

R, S, T, and D may be used as suffixes with class 2 and class 3. They indicate, respectively, a rock, soil, topographic or drainage condition. Class 6 is used to indicate land which for any of a number of reasons is considered non-irrigable.

Every section of the 1,029,000 acres of the project area has been thoroly mapped as to topography, depth of soil, texture of soil, alkali, rock and drainage conditions. At least one test hole has been made in every 40 acres. Large scale maps of every section, on a scale of one inch to four hundred feet, have been prepared. On these maps, the land classes are shown.

Theoretically, a Class 1 unit should be from 60 to 80 acres in size; a Class 2 unit from 80 to 100 acres; and a Class 3 unit from 100 to 160 acres. Actually, the problem of laying out farm units is complicated by the uneven distribution of land classes. Orderly planning of farm units frequently demands that two or more land classes be included in one unit.

The overlay method is used in laying out the farm units. On a detailed, large scale map of a section which shows canals, railroads, highways, topography and soil conditions, an overlay is placed. Farm unit boundaries are largely fixed by structural factors, such as irrigation canals, and by topography. The complex part of the planning involves a balancing of good land and poor land to create a farm unit "of sufficient acreage for the support of an average-sized family at a suitable level of living."

Figure 3 shows how an actual farm unit has been planned. The unit is superimposed upon a detailed map of a part of a section of land. This particular unit contains 79.8 irrigable acres.

Since about 80 per cent of the project area is in private ownership, provision is made for objections by the land owners to proposed farm unit layouts. After all objections are resolved, usually by compromise, the final plat is filed in the county auditor's office.

The value of each farm unit is fixed by an independent, three-man appraisal board. One member is chosen by the boards of directors of the three irrigation districts into which the project is divided; the Bureau of Reclamation appoints one member; and these two appoint the third. Dry-land values serve as a guide in making appraisals. If the owner is dissatisfied with the value placed upon a unit by the board, he may request a reappraisal. Five years after a farm unit is irrigable, it is exempt from appraisal and its value will be determined by the prevailing market.

GETTING SETTLERS ON THE LAND

Sixty-six thousand acres had irrigation water available in 1952. This acreage had been divided into 927 family-size farms. Only 400 of these farms were actually using water in July, 1952. These 400 farms contained about 28,000 acres of irrigable land. In other words, just about 40 per cent of the land for which water was available was actually being cultivated. One might wonder why all

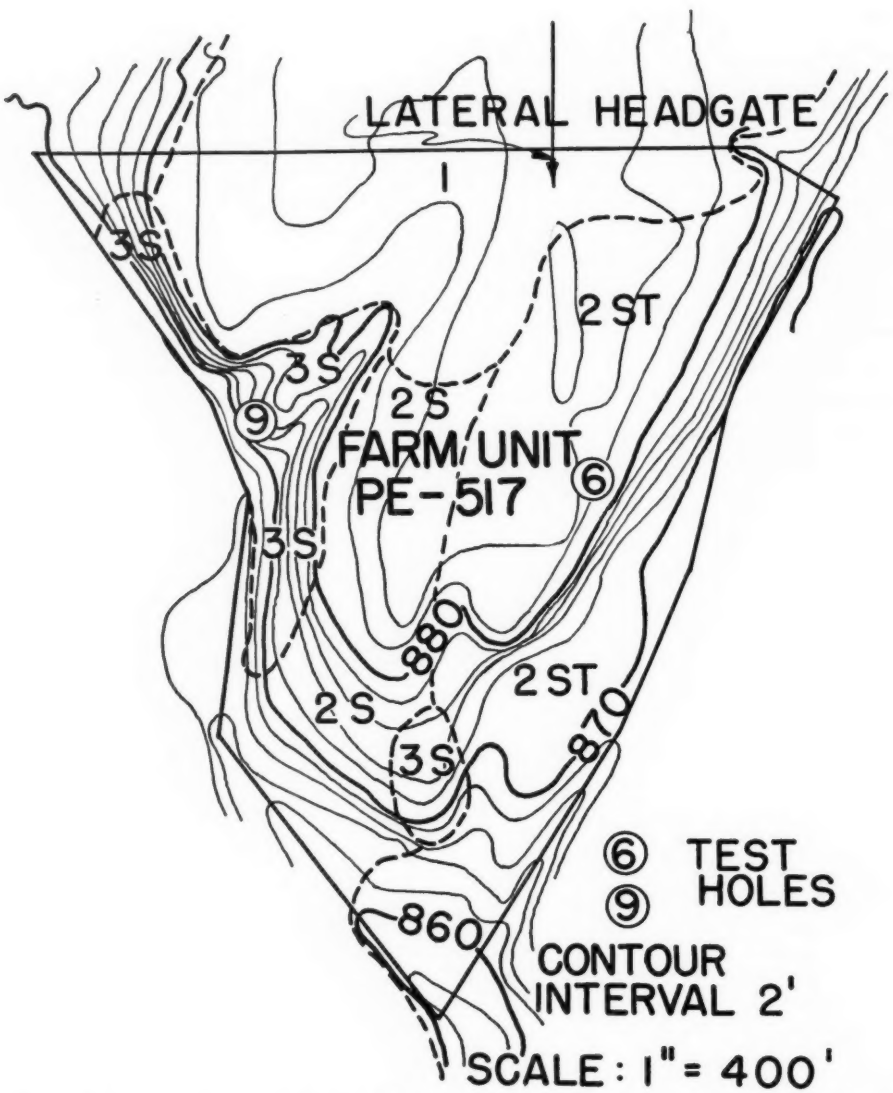


FIG. 3. This map of an actual farm unit illustrates how land classification and topography determine the size and shape of farm units.

of the 66,000 acres which came under ditch in 1952 did not immediately go into production. There are two reasons for this: 1. some of the owners decided to wait and see how their neighbors came out in their first experience with irrigation farming; and 2. the Bureau does not deliver water to a farm unless it "conforms," i.e., unless all of the land in a farm unit is in one ownership. It often requires considerable time to unify ownership, especially in the case of estates being settled.

As noted above, the greater part of the land in the project area is in private ownership. This land can be purchased by anyone with the necessary capital, provided he can find a landowner who is willing to sell at the appraised value. At the present time, there is practically no land for sale at appraised prices, and if a buyer pays more than appraisal value his water rights are cancelled. Expiration of appraisal values five years after water becomes available to a farm unit is probably the main reason for slowness of land sales in areas which will be getting water within the next year or two.

Veterans are given preference in the purchase of farm units on approximately 20 per cent of the project area which is owned by the federal government. Evidence of the widespread interest in the project lands is shown by the fact that more than 4,000 veterans applied for 127 farm units sold in the first half of 1952. When a sale is announced, applications are taken from all veterans who claim that they meet the requirements of character, industry, experience and capital. The applicant is required to furnish proof of at least two years of farm experience after the age of 15, and that he has a net worth of at least 4,500 dollars; and he must furnish substantial references as to his character and industry. Sale of units is based upon a priority list made up by drawing names.

Domestic Water Supply

To a new settler on the project, no problem is of more immediate importance than that of domestic water supply. In this arid region there is no surface water and the irrigation ditches will carry water only during the growing season. This leaves the settler three choices as to how he will provide his family with water. He may haul water; he may drill an individual well; or he may join with neighboring farmers and develop a community water system.

At the present time, most of the new settlers are hauling water.

This is inconvenient, but for the time being it is cheaper than drilling an individual well. The average cost for an individual well is about 2,000 dollars. For most, this is an excessive capital outlay.

It seems probable that eventually community wells will be developed to serve most of the farmsteads. The Bureau does not drill wells, either for communities or for individuals. However, it does issue a large scale map showing the recommended layout of domestic water systems for each block of land as it comes under irrigation. The size of the group systems recommended is determined by topography and farm shapes. Figure 4 shows the layout for a domestic water system in Block 11, near Othello, where

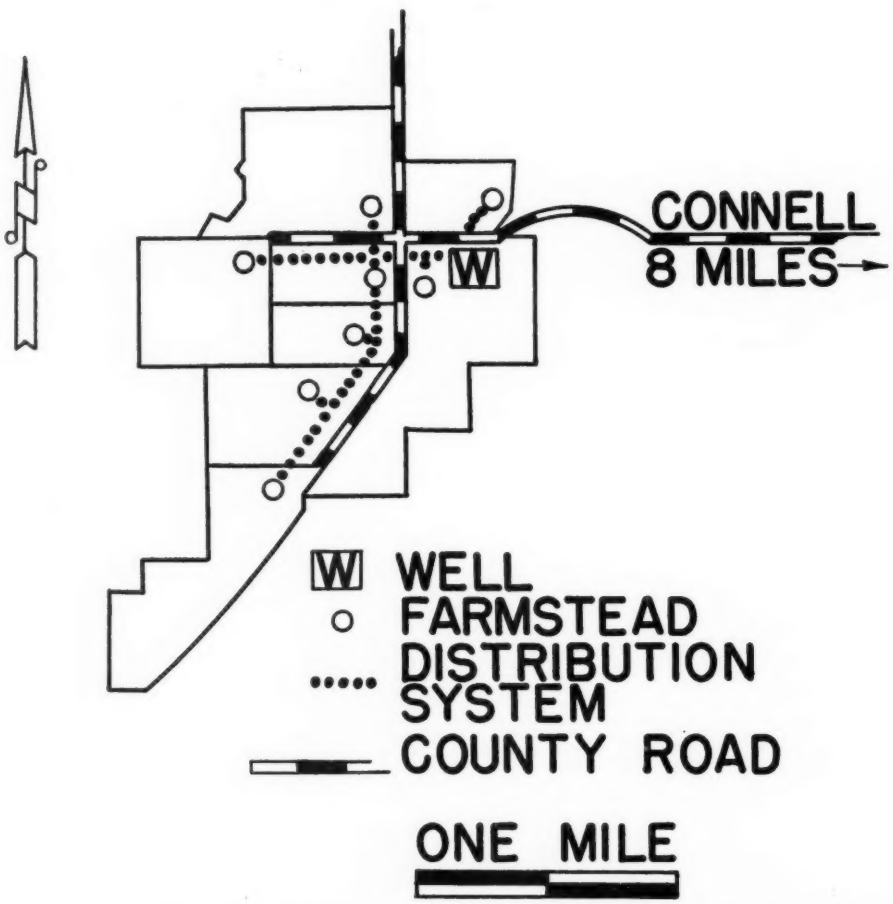


FIG. 4. The domestic water system shown here serves eight farmsteads. Other systems in the project serve from one to thirty farmsteads, the number depending largely upon topography and location of farmsteads.

there is a great deal of relatively level land. Usually, the community water systems are financed by the Farmer's Home Administration.

It will probably require several years for most of the farm units to secure water from wells, either individually or thru community systems. Until the farms do have a year-around water supply, pleasant family living will be under a handicap and the development of livestock enterprise will be retarded. The importance of livestock to the Columbia Basin Project is epitomized in this statement by one young farmer as he struggled with the light, sandy soil on his farm near Moses Lake: "What this lands needs is about twenty tons of barnyard manure to the acre."

WHAT CROPS TO GROW

A farmer has an abundance of information to guide him in the selection of crops to grow. The Bureau of Reclamation has prepared a climatic map, which shows the average length of the frost-free season for all parts of the project. The range is from 120 to 195 days, with topography as the major factor accounting for the range. Four development farms, each located on a distinctive soil type, have been operating in different parts of the project. They provide information as to the adaptability of various crops to the different soil types found in the basin.

The development farms are leased to farmers who agree to cooperate with the Bureau and the United States Department of Agriculture in farming practices and farm research work. The Department of Agriculture is authorized to use 25 per cent of each development farm for experimental work.

Records kept by the development farms indicate that, under optimum conditions, high yields may be secured from basin lands. The following list is for average acre-yield of crops which have been grown on the development farms: Alfalfa hay, 5-7 tons; potatoes, 16-18 tons; sugar beets, 28-30 tons; green peas, 3,000 pounds; dried peas, 2,600 pounds; dried beans, 2,600 pounds; and field corn, 80-85 bushels.

A preliminary survey shows that the leading crops grown in 1952 are wheat, dry field beans, peas (both green and dried), potatoes, sweet corn, sugar beets and onions. It may be several years before a definite pattern of crop production becomes apparent. Expectations are that the project as a whole will develop three major types of production—row crops, dairying and beef cattle.

SOIL PROBLEMS

As the seven year program of development proceeds, it is evident that there are problems arising from the nature of the soils found in the Columbia Basin. In the area now coming under irrigation in the northern part of the project, six major soil series are found: Ephrata, Burke, Warden, Wheeler, Quincy and Winchester. Each series has its distinctive features, but they all have two characteristics in common: 1. they are light, with varying high percentages of sand and almost completely lacking in humus; and 2. they are deficient in nitrogen.

The irrigation system for the project is laid out for surface irrigation. Unless the individual farmer installs a sprinkler system, he must have his land levelled to get water to his crops. Sage brush and other natural vegetation must also be removed. The removal of natural vegetation and the stirring up of the soil in the levelling process create ideal conditions for soil blowing. During the spring of 1952, there were two days when Highway 7, south of Quincy, had to be closed to traffic because of low visibility. In this area many plantings were blown out so badly that replanting was necessary.

While the settler on the project has serious soil problems to face, assistance is readily accessible from both the Agricultural Extension Service and the Soil Conservation Service. From these agencies the farmer can get technical assistance in levelling land and in laying out irrigation systems. He can get practical advice on irrigation techniques. He may be invited to go on a tour to see good irrigation practices. In fact, so much help is available that a person looking over the farms in operation in 1952 might wonder why any mistakes at all were made.

PAYING FOR THE PROJECT

In any sizeable irrigation enterprise, there are two categories of cost. One is the construction cost, the other is the cost of operation and maintenance. The construction costs of the Columbia Basin Project run very high. The actual cost for each irrigable acre in the project is estimated to be about 475 dollars. However, all the cost allocated to irrigation, except 85 dollars per acre, is to be repaid from the revenues of the power plant at Grand Coulee Dam.

The charge of 85 dollars per acre is payable over a 40 year

period, without interest. This comes to an average of $2.12½ per acre per year. However, the amount actually paid by the farmer will depend upon the quality of his land. The best lands will pay a higher charge than the less productive lands. Studies are now being made to determine the scale of payments in accordance with land productivity.

The cost of water delivery, which is based upon the cost of operating and maintaining the irrigation system, is a matter of immediate interest to the new settler. This, like the construction cost, will vary according to land classification. Present plans call for charges ranging from $7.20 per acre against class 1 land to $3.60 against 3S land. According to this scale, a farmer with an 80-acre unit, of which 40 acres is class 1, 20 acres class 2, and 20 acres class 3S, would be paying $337.60 for water delivery the first year of regular payments, which begin the second year that water is available.

IMPACT ON SERVICE FACILITIES

Roads. During the present program of gradual expansion of irrigable acreage, the greater demand is for service roads, which are primarily a county responsibility. Construction of these roads must at least keep up with the rate of settlement. There are well authenticated reports of irate settlers from a newly irrigable area pounding the table as they demanded that county authorities produce immediate results in a roadway to the area.

In the road construction program, the farm units are the first consideration. As already noted, the size and shape of farm units are determined largely by topography and soil classification. Since these factors vary thruout the project, any uniform road pattern is impossible. In general, the new county roads described a rectangular pattern, designed to serve every farm unit. The Bureau of Reclamation lays out the pattern. The county engineer, who may suggest revisions, supervises the construction of the roads.

Schools. Adequate school facilities rank along with roads in priority. Population increase during the past decade has made necessary a considerable expansion of school facilities. Grant County had a population of 6,000 in 1940 and 24,325 in 1950. School populations reflected this increase, enrollment in the four towns of Grant County (Quincy, Soap Lake, Ephrata and Moses Lake) jumping from 727 in 1940 to 3,670 in 1950. With the exception of Moses Lake,

which has an Army Air Force base nearby, these increases in school population are attributable almost entirely to the irrigation development. To take care of the increased enrollments, at least one new school building has been constructed in each of the above towns, with federal funds covering a large portion of the total expenditure.

Market Centers. As the basin area comes into fuller production, new centers where supplies may be purchased and where farm produce may be marketed will probably develop in response to needs. The existing towns and villages will experience some growth. The amount of growth which each experiences will likely be determined by its location with respect to the project as a whole. The "fringe towns" such as Soap Lake, Ephrata and Pasco are not as favorably located as Moses Lake and Othello.

At the present time, Moses Lake seems to be the commercial center for the project area. The visitor in Moses Lake is impressed with its boom-town aspect. Numerous firms have established branches here in order to "get in on the ground floor" of the basin development. Near Moses Lake the Utah and Idaho Sugar Company has built a large plant for processing sugar beets.

Boom influences are also apparent in Othello and will probably become more pronounced as the surrounding area gets water. A million dollar building program, involving the construction of a new commercial center and 106 homes, began in the latter part of the summer of 1952. Present speculation is that Othello may become the major urban center in the project area.

CONCLUSION

The program of development now being followed in the Columbia Basin Project will offer an opportunity for continuous investigation. A project so large opens many avenues for special studies. As expansion proceeds, the problems discussed in this paper will recur and others may develop. The maps for this article were adapted from the Bureau of Reclamation.

SOME TESTS FOR FIRST GRADE GEOGRAPHY

ETHEL PACE
Parkview Central School, Bedford, Indiana

Near the close of this past school year, I had a new teaching experience—that of testing first graders on the subject of geography. During the year I had tried to be more specific in my teaching of some of the basic geographic concepts. I was interested in learning how much, or how little, geography knowledge the children had gained.

Small units on soil, plant life, animal life, minerals, weather and climate, water and water bodies and land and land forms had been studied. The tests were planned to cover various phases of the primary physical features of geography rather than the work of one specific unit.

CONCEPTS

The following concepts were the ones most stressed during the year. (These concepts are suggested by the "Concept Chart" of the *Geography Foundation Series* by Poole, Barton and Baker.)

1. Some land is hilly and some is level.
2. There is soil on the surface of the land.
3. Plants grow on the land.
4. There are lakes on the land.
5. Stones come from the rock of the earth.
6. Clay and sand come from the rock of the earth.
7. Soil is found on yards, farms and gardens.
8. Plants grow from the soil.
9. There are different kinds of soils.
10. Water falls as rain.
11. Some water from rain flows away and some soaks into the ground.
12. Water forms streams and lakes.
13. Some animals are domesticated.
14. Some animals live wild.
15. Animals need shelter.

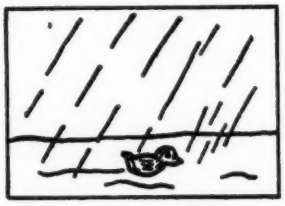
GIVING THE TESTS

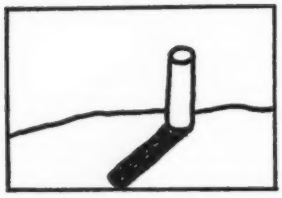
The tests were given to approximately half of the 29 pupils at one time. Before the children began their work, they were given an explanation of what they were going to do. They were going to take a test; it was very important that they do their best, but their test grade would not effect any grade on their report cards. Since I was especially anxious for each child to do his own work, I suggested that "cover papers" be used to keep one from "accidentally" seeing another's paper.

DRAW A LINE FROM THE WORD
TO THE PICTURE IT TELLS ABOUT

SHADOW

LAKE





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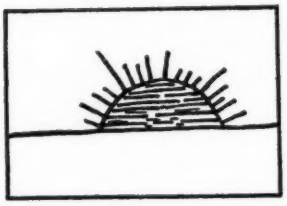

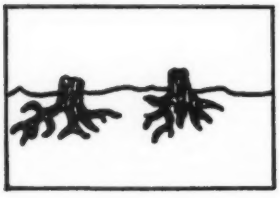

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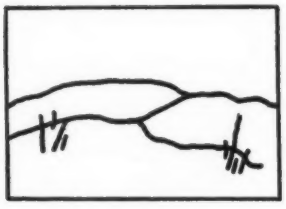
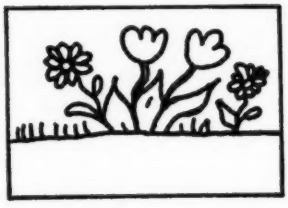
FLOWERS



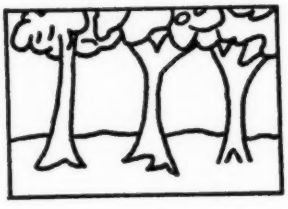
TREES

RAIN



LEAVES

SUN



TEST I

Draw a line from the name of the animal to the kind of a home it has.

rabbit	coop
pony	nest
dog	hole
chicken	water
fish	barn
bird	kennel

Results. In this test there was a possibility of a perfect score of six. The scores tabulated as follows: 9 had a score of 6; 7 had a score of 4; 7 had a score of 3; 4 had a score of 2; 1 had a score of 1; 1 had a score of 0.

TEST II

Draw a line under the words that name something good for a garden.

rain	plants
weeds	green leaves
rocks	sunshine
loam	toads
dogs	chickens

Results. In this test the perfect score was 10. The class scored as follows: 4 had a score of 10; 8 had a score of 9; 4 had a score of 8; 8 had a score of 7; 3 had a score of 6; 1 had a score of 5; 1 had a score of 4.

TEST III

Since pictures were used the following test is printed from an engraving (all copies of this test given to the children were hectographed):

Results. This test had a possible score of 10. The scores were as follows: 10 had a score of 10; 3 had a score of 9; 4 had a score of 8; 2 had a score of 7; 2 had a score of 6; 2 had a score of 5; 3 had a score of 4; 2 had a score of 2; 1 had a score of 0.

TEST IV

Draw a circle around the word that makes the sentence correct.

Potatoes grow in ————————.
rocks soil water

Potatoes grow best in ————————.
sand clay loam

Clay is ————————.
trees soil water

A lake is ————————.
sky water land

Roots grow ———— the ground.
under on above

Results. This test had a possible perfect score of five. The scores

tabulated as follows: 9 had a score of 5; 11 had a score of 4; 2 had a score of 3; 2 had a score of 2; 4 had a score of 1; 1 a score of 0.

TEST V

The children were given the following instructions and a sheet of paper 8.5 by 11 inches.

Make a picture.
1. Put some white clouds in a blue sky.
2. Make some grass.
3. Make a hill.
4. Put some rocks on the hill.
   Put "1" on the hill.
   Put "2" on the rocks.
   Put "3" on the clouds.
   Put "4" on the sky.
   Put "5" on the grass.

Results. This test had a possible perfect score of 10. The scores tabulated as follows: 12 had a score of 10; 2 had a score of 9; 2 had a score of 7; 3 had a score of 6; 4 had a score of 5; 5 had a score of 4; 1 had a score of 2.

CONCLUSION

I thought the results of the tests were quite gratifying. The children had gained an interest in the physical environment. They indicated observational skill and asked intelligent questions. Every child had gained some geographic knowledge about basic concepts, and some had gained interpretative information. Not only had I tested geography, but I had also made a good evaluation of their independent reading.

IS THERE AN ANTARCTIC OCEAN?

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Recently I was asked point blank, "Do you teach that there is an Antarctic Ocean?" My short answer was "No!" In a lecture on "Pattern of the Continents and Oceans" before five hundred students enrolled in a Physical Geography course each year, I stress that scientific research especially during the past few decades has discovered that the term "Antarctic Ocean" is obsolete and therefore we should teach only four oceans.

RECOGNIZED AUTHORITIES

Who are these authorities that by word and action recommend and practice the discarding of this geographic term? Besides learning that the term is obsolete classroom teachers will need to know the sources and names of the authorities who substantiate their discarding of the term. Sources of information are quite important so long as some textbooks continue to print out-dated material or students continue to read textbooks printed before the authorities took their stand on this term.

Five authorities are: 1. The United States Board of Geographic Names, United States Department of Interior, Washington, D.C.; 2. The American Geographical Society, Broadway at 156th Street, New York City; 3. The National Geographic Society, Washington, D.C.; 4. The United States Hydrographic Office; and 5. International Hydrographic Bureau.

NO ANTARCTIC OCEAN

"Explorers Prove There is No Antarctic Ocean" is the title of a short article published in the November 17, 1952, *Geographical School Bulletins* of the National Geographic Society. Most people will ask "Why isn't there an Antarctic Ocean?" Perhaps the simplest and clearest answer to this question is that an ocean is a large body of water occupying a distinct basin. The earth's four oceans, Pacific, Atlantic, Indian and Arctic have well-defined basins. Oceans as other features on the earth's surface occupy space. The space oceans occupy is their basin. The basin rims are their boundaries.

It was formerly believed that there was a basin centered around and perhaps under the polar ice and the ocean within this theoretical basin was called Antarctica. Recent discoveries have proved that Antarctica is a continent covering nearly six million square miles and no basin dips down toward this land mass.

Another reason for formerly referring to the water around Antarctica as an ocean was the fact that the water adjacent to the land mass was cold and contained ice floes and icebergs. Of course decades ago one could say that the inside boundary of the Antarctic Ocean was the shore of Antarctica, but where was the outside boundary? Many believed that future exploration, especially of ocean waters, would help establish the outside or northern limits of the Antarctic Ocean. However, research in the last decades has

pointed out the difficulty of establishing the northern limits of this cold water because of seasonal change.

Consequently since a basin did not exist and since the northern limits could not be clearly established, the limits of the Atlantic, Pacific and Indian Oceans have been extended south to the Antarctica Continent and the Antarctic Ocean eliminated.

Research Uncovers Evidence

Naturally the decision to discontinue treatment of the Antarctic Ocean as a separate and distinct body of water did not come suddenly; but it is based on careful, painstaking research costing millions of dollars. Scientists do not discard on the spur of the moment a term formerly applied to approximately five and two-thirds million square miles of the earth's surface. It is by exploration and discoveries of various Antarctic expeditions sponsored by the American Geographical Society, the National Geographic Society, by the United States Government and by foreign countries that a large amount of facts has been collected about both Antarctic and the floor of the ocean around Antarctica that prove there is no evidence of an Antarctic ocean basin.

Books, articles and reports by members of different expeditions, such as Admiral Richard E. Byrd (leader of four expeditions), Captain Robert F. Scott, Lincoln Ellsworth, Finn Ronne, contain information which led to the new concept. In bound copies of the Geographical Review (published by the American Geographical Society) and National Geography (published by the National Geographic Society) for the past decades (especially during the 20th century) you will find numerous articles on the Antarctic explorations which helped to support this recent conclusion.

Antarctic Ocean Omitted

In recent years reports, atlases and books are attempting to correct the old misconception of an Antarctic Ocean by disregarding the term and stressing that the term is obsolete. The United States Hydrographic Office in its reports which give statistics on areas and depths of oceans formerly reported on five oceans but in recent years it only gives four omitting the Antarctic. "Antarctic Ocean" is also omitted in the more recently published atlases and maps released by the different map companies. For example, the *Cosmopolitan World Atlas,* published by Rand McNally and Com-

pany in 1949, omits the name from its maps and, in the section entitled "Historical Gazette of Geographical Names," gives the following information: "*Antarctic Ocean.* Obsolete name for southern part of the Pacific, Atlantic, and Indian oceans bordering the continent of Antarctica." In the spring of 1953 Dr. George H. T. Kimble, then Director of the American Geographical Society, informed me that the Society's position in regard to the term "Antarctic Ocean" is in agreement with the following quotation from "Limits of Oceans and Seas," International Hydrographic Bureau, Special Publication No. 23, Provisional 3rd Edition 1950, page 4:

> "The Antarctic or Southern Ocean has been omitted from this publication as a majority of opinions received since the issue of the 2nd edition in 1937 are to the effect that there exists no real justification for applying the term Ocean to this body of water, the northern limits of which are difficult to lay down owing to their seasonal change. The limits of the Atlantic, Pacific and Indian Oceans have therefore been extended South to the Antarctic Continent."

All textbook authors have not yet made the change from five to four oceans, but the change may come rapidly during this decade. The authors of *The World About Us,* written for the intermediate grade level and published in 1948, omitted the Antarctic Ocean. If the term is obsolete, why use it? Moreover, the large number of geographic terms has always been a handicap and here is an opportunity to eliminate one and one that is difficult for many children to spell.

A SEVENTH GRADE APPROACH TO THE STUDY OF A GEOGRAPHY OF GERMANY

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A complete knowledge of geography is even more important today for world understanding than it was a decade ago. But quite often it is presented as separate and entirely unrelated facts. As a result it loses most of its appeal for the student.

The old approach of introducing the regional geography of a country by giving the capital, other important cities and its principal exports and imports is a thing of the past. And I am sure this antedated method will not return in the near future. Of course it is necessary that the above mentioned elements of geography be

taught along with such things as climate and topography and the way man has adjusted to these aspects of his environment or changed the environment to fit his needs.

With this in mind, and as a means of varying the daily routine of question and answer sessions for a seventh grade geography class beginning the study of Germany, I found it desirable to divide this country into the four zones of occupation—French, British, American and Russian.

STUDENT PLANNING

Following this plan the class formulated, under the guidance of the teacher, a list of desirable problems they would like to investigate concerning the various sections of the country. A list of desirable aims are as follows:

1. To know the general topography of Germany.
2. To locate the important rivers and evaluate their uses.
3. To visualize the climatic differences.
4. To discover the agricultural products and the climatic reasons for their growing in various localities.
5. To learn the important minerals and their location.
6. To know the location of the important industries in relation to the minerals.
7. To find the location of the important cities with reference to geographic factors such as minerals, rivers, etc.
8. To see the results of the war and its effect on Germany.
9. To discover the tourist attractions.

METHOD OF RESEARCH

The class was divided into nine committees and a chairman was selected for each committee. The members of each respective group were chosen relative to the aspect in which they were particularly interested.

With the cooperation of the librarian, all students were taken into the library. And each committee sat at a separate table and began working on one of the aims listed above.

The American Zone of Occupation was the first section on which we focused our attention. The students were instructed to exhaust all available material in their textbook. They were then permitted to use reference books such as encyclopedias, other geography books and the World Geography Readers. Each person was held responsible for a certain part of the material. It was written as a report and given to the chairman of the committee. He formulated all material into another concise report. When this part of the work was completed, we returned to our classroom.

DISCUSSION PROCEDURE

The next step was to give each person an outline map of Germany showing the four zones of occupation and the boundary countries. This served as a work map as the chairman gave the report for his committee. Mountains, plains, important rivers, cities and large coal mining areas were among the important information appearing on this map.

Pertinent questions were asked following each report. And the individual giving the report acted as an authority on the subject and tried to answer all questions to the best of his ability. If he found it impossible to do so, he asked the teacher for assistance. In this way the teacher served only in a reference capacity.

The discussion was supplemented by pictures brought to class by pupils whose fathers or brothers served in Germany during World War II. They were also encouraged to draw pictures on various aspects of life in Germany, the better pictures being placed on the bulletin board.

As the work progressed, a more vivid mental picture was formulated by each pupil concerning the American Section of Germany or the part in which our troops are stationed at the present time.

After this phase of the work we studied less intensively the French, British and Russian Zones of Occupation. Comparisons were made with reference to the aforementioned objectives.

REVIEW

The review was accomplished by the use of several methods—the question bee and the glidogram. Both of these proved to be entirely satisfactory.

SUMMARY

When this group of 40 students realized that the work could not progress without their contribution they cooperated to the utmost with the teacher and fellow students. Thus the goals were attained and an entirely successful part of our work in geography was brought to a conclusion.

Could not this informal and varied method of teaching be applied to all subjects in our public schools? How extensively is it used?

STUDENT INTEREST APPEALS IN EARLY GEOGRAPHY TEXTBOOKS

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Geography today is more than a subject which conveniently supplies a large textbook behind which the inevitable comic or adventure story may find a suitable hiding place. However, a large amount of the non-school education with which the young of our nation are being inundated today is hardly mentally or emotionally digestible if they are to be properly adjusted to meet life's problems. The limited number of school hours in a day and the intensified interest span provided by comic and adventure books and radio and video crime programs offers the modern teacher a challenge that at times seems almost insurmountable.

The commercial appeal to the interests and emotions of children has been intensified in the present century. However, early American geography textbooks, instead of competing with lurid, horrid or adventurous stories recognized in some cases the need of incorporating childish interests with the somewhat dry factual materials published in our geographies prior to the civil war.

Justified as these writers were to some degree because of the factual nature of geography textbook content at that time and vocabulary difficulties not yet fully appreciated, then as now there was some danger that stories unsuited to the proper psychological development of youth would be placed before them for reading. Some stories, no matter how interesting, may do immeasurable harm on the pliable adolescent if they have no definite connection to the learning content and are morbid in their details. W. Wilbur Hatfield expressed this attitude toward controls on reading content when he wrote:

> First, whatever is harmful to the child or youth must be excluded; the false, and such horror and sex experiences as the immature cannot sustain without shock and warping their natures. The false includes sentimentality, glamorous presentation of evil-doing, inconsistent characterization, misrepresentation of moral causes and effects, and contravention of natural laws unless these are as in fairy stories, tacitly suspended. The horrible, practically always fantastic apparently affects children with steady nerves very little, but in every group there are a few hypersensitives who really suffer and are damaged. Since most of the horror stories seem to have little value beyond excitement, they may well be omitted. . . .[1]

[1] W. Wilbur Hatfield, *An Experience Curriculum in English* (New York, 1935), p. 19.

Not all of the geography textbook writers inserted horror stories in their content. It might be said that there were few who were guilty of motivating interest in this fashion. However, there was a trend in early geography textbooks to insert highly descriptive stories. This was of great importance because these stories, no doubt, increased interest in the childish minds but at emotional costs that cannot be measured.

HORROR STORIES

Several of these stories were contributed by a teacher who declared: "Here is a little book which has been made on purpose for you. It was written by a teacher, who loves little children very much; and who is always much pleased to see them fond of learning."[2]

One of these tales was concerned with the White Mountains and vividly explained:

> A few years ago, at the foot of one of these mountains, at a place called the Notch, there lived a family, in which there were three beautiful children. The house was many miles from any other. A storm came on, and it rained very hard for two days. A large quantity of earth and rocks, on the top of the mountain, above the house, was loosened. In the night, the family was awakened by a great noise. They sprang from their beds and ran naked out of doors. They were instantly overtaken and covered with the earth, and trees, and stones and water, falling from the mountain.[3]

This thrilling but inappropriate educational story may have been copied from Goodrich, who had written in his *Peter Parley's Geography* seven years before, in 1829, the thrilling narration "of rocks and stones crushing the inhabitants of the Notch in the White Mountains."[4] He increased the excitement with a rough woodcut which depicted the stones falling upon the helpless wretches before they could escape.

Goodrich also added an account of the sea serpent. When Peter Parley took his world "trip" this superstition concerning the sea must have been extant. This monster was portrayed as being "as large as the mast of a ship, and has frequently been seen, along the shores of New England. Here is a picture of him."[5]

Heroics were not left unnoticed in the *Malte-Brun School Geography* for the more advanced students. This was also written by

[2] A Teacher, *Village School Geography* (1st ed.; Hartford, 1836), p. 3.

[3] A Teacher, *op. cit.*, (1836), p. 25.

[4] S. Griswold Goodrich, *Peter Parley's Method of Telling About Geography to Children* (1st ed.; Hartford, 1829), p. 15.

[5] *Ibid.*, p. 14.

Goodrich and may have left him open to the charge by Woodbridge, "In this way he has furnished an entertaining and instructive series of volumes for the parlor, or for the leisure hours of the advanced student."[6]

The story, which no doubt saddened many a childish face, was:

> The sailors and all the passengers jumped into the lifeboat, save one gentleman, his wife and two children. The lifeboat was full; the sailors requested the gentleman to jump into the boat, but, declaring that there was not room for his wife and child, refused to permit them to enter. "I will not leave them to perish alone," said the gentleman, turned his back upon the sailors. The boat pushed off, the wreck settled rapidly in the water, and soon the smooth waves closed over the scene.[7]

How courageous was the conduct of the gentleman in a then "gentleman's" world; how vile the courtesy of the sailors. The lack of true geographic relationship was also apparent.

Another story which also came from the sea, but had the elements of a horrid melodrama was contributed by "A Teacher," the anonymous writer of the "Notch" tragedy. This tale read as follows:

> A party of sailors some years ago were walking on the shore in this country, when one of them felt something hugging him behind. He thought it was one of the other sailors, and cried out "who's there; stand off." The sailors screamed, "a bear! a bear!" and ran to get their guns. When they came back, their companion was a corpse. The bear sprang upon another sailor, plunged his teeth into his body, and began to drink his blood. The others soon after shot the bear, and skinned him. His skin was thirteen feet long.[8]

Ambiguous Descriptive Content

Sometimes the reading content was not only on the morbid side, but it was also outside the understanding or interests of the students. Emma Willard, for example, contributed this choice morsel of wandering, tho prophetic thinking, altho she hoped, no doubt, that it would exert a great influence on the plastic minds of the young.

> *My Dear Children*—In writing this little work I have cared for you. I have been anxious to be useful for you. I might have made my task easy by writing out parts of larger works, but I have been chiefly desirous to assist you in understanding your lessons. How many abler writers are also giving their best thoughts and exertions to enlighten you. How many teachers are laboring to instruct you. How many parents are devoting their lives to giving you the means of improvement. Exert yourselves that our labors be not in vain.
>
> Does it not sometimes surprise you that people should consider you of so much

[6] William C. Woodbridge, *Universal Geography* (1836), p. viii.
[7] S. Griswold Goodrich, *School Geography* (1839), pp. 129-130.
[8] A Teacher, *op. cit.*, (1836), p. 54.

consequence? You are fond of your little sports, and are sometimes apt to feel that these are your most important concerns, and to think it almost unkind that you should be required to study, and not left, like the butterfly, to wander and play at your will. Learn better to estimate your own value. You are hereafter to constitute a nation, and that nation the first great American Republic. Proud and happy above that of all the nations to have gone before you, will your political destiny be, if you prepare yourselves by education to sustain the government under which you have the happiness to be born. The good and wise of every land look to your country to move, before the nations, as did the pillar of fire before the Israelites, to lead the way to liberty and happiness. It rests with you to realize, or disappoint their hopes. . . .

This little work has been mostly written for you while you were sleeping in your beds:—perhaps it may be studied when she who writes may be sleeping in her grave. Impressed with this thought, she felt an affectionate desire to address you, children of her country, lambs of her Saviour's flock, a short but tender farewell.[9]

A lack of geographic information of some parts of the world was noticeable in some of the early geography textbooks. This was the result of the limited explorations which had been made at the time that they were written. As a consequence, students were presented with popular fallacies, "unsupported by an authentic testimony."[10] As late as 1835 it was admitted that "the *interior* of New Holland (Australia) is entirely unknown."[11]

The students learned, for example, that in North America: "The principal mountains are the Appalachian or Allegheny mountains. They extend through the United States, from north east to south west, in parallel ridges, about 1000 miles. They are from 100 to 130 miles in breadth, and about 150 from the Atlantic Ocean."[12]

A glaring mistake was also made by Cummings who wrote in 1825:

The boa, or serpent of the desert is found here, and is often 80 feet long. It moves with incredible swiftness, and no animal can escape it. Sometimes it suspends itself from the branches of trees over places that are frequented by other animals, and then leaps upon them. It will twist itself around oxen, and other large animals, crush them, and break all their bones, and then swallow them.[13]

Since this statement referred to the Barbary States of North Africa it was wrong for several reasons. Reptiles of this species are found in the more humid southern sections of Africa, and in a desert region it was hardly possible, even if snakes were as large as this,

[9] Emma Willard, *Geography for Beginners* (1st ed.; Hartford, 1826), pp. 109-110.

[10] S. Augustus Mitchell, *A System of Modern Geography* (2d ed.; Philadelphia, 1840), p. v.

[11] William C. Woodbridge, *Rudiments of Geography* (18th ed.; Boston, 1835), p. 150.

[12] Joseph Scott, *Elements of Geography* (Philadelphia, 1807), p. 57.

[13] J. A. Cummings, *An Introduction to Ancient and Modern Geography* (10th ed.; Boston, 1825), p. 141.

that they could have secured a sufficient food supply on which to exist.

Not all of the anecdotes woven into the early American geographies were as pointless or inaccurate as the examples which have been given. Religious quotations, for example, while not strictly geographic in scope, were an aid to character development. As time went on, more scientific exploration also gave a better background to geographic information as was evidenced by the highly critical comments of Mitchell.[14]

CONCLUSIONS

The inquisitive, exploratory, childish mind will somewhere find answers for the thousand and one questions that skeletize its life's experiences. Some satisfaction of these interests may be incorporated in the standard textual materials, as was true in early American geography textbooks, or behind some large wide-spread volume, as has been witnessed too often in the modern school room. A student somehow and somewhere will find solace from the boredom of his class.

The answer, of course, is for geographic teaching to be made so meaningful and interesting that neither thought nor time will be devoted to things that do not count. Fortunately the materials today are available; the methods are at our command; and progressive geography teachers are meeting the challenge that this is "one world." Altho the nation's schools in this airminded age need to devote more time to geography, one feels that the available time is used to the student's advantage in most cases without the irrelevancy found in early American geography textbooks. This may be left to the mass commercial communication media that afflicts American life today.

[14] S. Augustus Mitchell, *op. cit.*, (1840), pp. v-vii.

ADEQUATE TEACHING OF GEOGRAPHY AND HISTORY REQUIRES SEPARATE COURSES

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Each subject which one teaches uses material belonging to other subjects. At times, geography assignments make use of decisions regarding words, pronunciations and the grouping of sentences. However, if the only teaching of English Composition were that which is gotten from geography assignments, it would be inadequate teaching of English Composition. In teaching geography, arithmetic is frequently used. But, if the only teaching of arithmetic were that used in geography assignments, the pupils would have inadequate teaching of arithmetic. Geographers are glad that history teachers use information from geography in teaching their subject. However, if that is all the geography the pupils get in school, it is a very limited type of geography and totally inadequate.

ADEQUATE GEOGRAPHY TEACHING

Geography which rates as thoro or complete should answer five questions: *where, what, what amount, how* and *why*. The first three questions are easy to answer. The last two need checks to make certain their answers are substantial and complete. They are the ones which make geography worth while. They are the ones which are the most likely to be slighted in history teaching.

We need to know what the word *how* and the word *why* mean in geography teaching. The word *how* seeks the methods which a group uses, such as the plans which an industry or a political unit endorses. The methods may be the arrangements which a commercial company has developed in its territory. As an example linked with the word *how,* farmers of today are using different methods in crop growing than the crop growers of 1900 used. A list of their methods telling *how* lacks the value which is added by the information gained when the question *why* is answered. The word *why* is needed to bring greater organization than is secured by the word *how*. The answer to the word *why* brings out both the advantages and the disadvantages. It also brings out both successes and failures. When we see both the *how* and the *why* we are being true to real life.

GEOGRAPHY AS A SEPARATE COURSE

We may now consider four reasons why geography and history should be taught in separate courses:

1. We live in a scientific age. In this age a greater number of persons are asking that we go beyond a superficial explanation to give a more complete reason. The scientific investigators have not found all the answers, but they are furnishing an increasing amount of information which has stood critical tests. Geography is ready to use the information which science supplies and is confident that the use of this information fits into more successful adjustments for all of life.

There can only be speculation for the explanation of events before the scientific age. The account of the battle of Long Island (August 29-30, 1776) illustrates the lack of scientific information. As a boy in a one-room school, I learned about the fog or thick mist which made possible the withdrawal of the colonial troops. The history text suggested that Providence was on the side of the colonists and produced the fog or thick mist. I doubt if any investigator is going to try to find out what conditions produced a fog or a thick mist in August, 1776.

An example, in contrast, concerns an event in February, 1942, and illustrates how science did play a part in helping one country to succeed. This event caused chagrin and greater concern for the future in an enemy country. It was in World War II when two battleships and one cruiser were able to sail 700 odd miles from Brest thru the English Channel to Helgoland Bight. The dash began during the night of February 11. German meteorologists had gathered information regarding air conditions hundreds of miles away. Using that information they predicted that drifting fog and mist would cover all the area thru which the vessels would sail. The scientific understanding of weather had enabled the German war vessels to move and escape in order that the Nazi's fleet might be more united. I have never read that Providence was on the side of Germany for that one day in February, 1942.

The German meteorologists had gathered much information in early December, 1944. The German commanders used that information and, before daybreak on December 16, launched the Battle of the Bulge by taking advantage of an almost impenetrable ground fog. Weather continued in the Nazi's favor until the 22nd. Allied meteorologists were continually busy and saw the change in

weather coming before the 22nd, when the ground fog lifted somewhat. On parts of the Western Front, on the day of the 23rd, the weather was fair, clear and bitterly cold. The ground was covered with a deep snow. Allied bombers and fighters could then have a clear view of Nazi units as targets. With the help of that weather, the Nazi advance was turned into a defeat. Thus the attack and counterattack were based on meteorological conditions. All of the weather of those historical ten days can be explained by meterologists.

Whether plans are made to use in war, transportation or production, the scientific basis must be emphasized today. Events previous to the scientific age fail to interest the growing number who are receiving training in the sciences and who are finding that science belongs to a large fraction of life.

2. We live in a commercial age. The farmer, the manufacturer, the transportation manager, the merchant and many others are anxious to make long-time plans. The successful men in these groups make their plans after gathering information from different kinds of investigation within the area's environment. They are concerned with the quality and surface conditions of the land, the climatic conditions and the resources of the area. They see the importance of improvements in transportation and in markets. In each area the different groups study about each others' advantages and problems.

Conversations with men of different occupations reveal that their plans include geography. This is true in spite of the fact that a geographer avoids wearing a label saying, "I teach geography." Men in different occupations may know a teacher during many years. They meet agreeably and the teacher continually keeps the conversation near the other man's occupational interests. Then, some day, one of the men asks, "Now, what do you teach?" One word, "Geography," answers; but to himself, the teacher says something like this: "We often had a good time when talking about your work but you were really talking about geography."

We can repeat that we live in a commercial age. The occupational groups soon become aware of the fact that they must learn about the influence of the surroundings on their work. They must use that information in both their present and future plans. They can learn much of it in the school of experience, but the American public school should provide more information in helping them to

have this useful training before they enter the work-a-day world.

3. We live in an age which emphasizes the present and the future. Geography is decidedly a study of the present. Often we wish for statistics which will be provided in the next yearbook published by our government. Every plan for the future whether in production or in conservation uses geography.

Two illustrations suggest the interest in both present and future. Rather frequently, people in out-of-state cars stop to ask me questions when they are driving thru the Madison College campus. They ask about the kind of institution, its support, its enrollment and its plans, etc. I have never been asked how the land was used before the college was located there. Apparently, no one who has known the college in only its recent years cares that it was an apple orchard and crop land before it was acquired by the State of Virginia. They are interested in the present and the future of the college.

Friends invite me to ride with them. During these rides we pass farms on which large flocks of turkeys are seen. No one asks how the land was used before the turkey growing was introduced. Again, the present plans and future developments are the interests which are expressed.

4. We live in an information-needing age. It is not only where an event takes place but more what conditions influenced the outcome of that event. Recently I have asked different classes about the shortened week for the coal miners; as a reason, class members answered in almost a chorus, "The unions." As one question follows another, they have gone around in a circle and again give as the reason, "The unions."

They have not heard that in 1925 the bituminous coal mines of the United States employed 588,493 employees who produced 520,052,741 tons. In 1948, 441,631 employees produced 599,518,229 tons. Three-fourths as many employees produce more tons of coal. In 1925, 13,677 employees of Virginia coal mines produced 12,799,43 tons. In 1948, 17,247 employees produced 17,999,405 tons. The Virginia employees increased 26 per cent; the state coal production increased 46 per cent. When asked why there are fewer coal miners in the United States, they again want to answer, "the unions"; they have not been told about the machinery used in the mines. They have not been told that we are using a smaller amount of coal per capita than was used 25 years ago.

Many of the students may live in homes which have stokers. A home with a stoker-fed furnace generally requires less fuel than the same would require with a hand-fed heating plant. Insulated homes require less fuel. Some responsibility for the coal situation in recent years is shared by thousands of insulated homes which have stoker-fed heating plants. These homes are largely outside the coal mining area.

What is the environment which has influenced the practice of a shortened week for coal miners? How do both my home construction and my business practice foster the shortened week? Whenever some recent event illustrates the topics being discussed the teacher of geography must continually check the environment of that event. This environment must be checked from all angles with information which answers more than *what* and *where*.

CONCLUSION

The age in which we live is scientific, commercial and information-needing; it is also one in which groups stress the present and look to the future. In such an age, geography can do its strongest work when it proceeds to work in the age as it really is.

The geography teacher uses information from formal art, arithmetic, English, history and several other subjects. He is always ready to say that whatever he uses is only a limited part of each other subject. All that the geography teacher asks is that teachers of other subjects who use geographical information will state that the information which they use is only a limited part of geography.

ELLEN CHURCHILL SEMPLE: HER GEOGRAPHICAL APPROACH TO AMERICAN HISTORY

LAWRENCE GELFAND
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HER EARLY CAREER

While the year 1893 is remembered in America chiefly because of its great depression and the Pullman strike controversy, American historians recall that during the Chicago Fair of that summer Frederick Jackson Turner presented his penetrating essay on "The Significance of the Frontier in American History." It was this Turner frontier thesis which almost revolutionized American historical concepts during the subsequent two generations of scholarship. Likewise, the year 1893 established a milestone in the development of American geographical methodology, for in that year a young scholar returned to her native America after two years of study in Germany amidst the most rigorous training then available within the realm of geographic discipline. Ellen Churchill Semple had returned to America, and with her she brought a mind possessing new techniques and ideas that were to alter the entire concept of geography as then studied in the United States.

In 1893, Ellen Semple was just reaching her thirtieth year. Born into a wealthy and refined Louisville, Kentucky family during a period when Americans were waging the Civil War, she was indeed fortunate in being able to receive the finest educational and cultural training then possible for a girl. Upon graduation from preparatory school in Louisville, she was accepted as a student at Vassar College where she majored in history and English literature. Historical training at Vassar in the 1870's emphasized the period of European classical antiquity, a study which Ellen Semple later utilized as a Mediterranean geographer. When, in 1882, she graduated at the age of nineteen, she was not only the youngest member of her class, but valedictorian as well.

The following nine years were largely devoted to teaching history in her sister's private girls' school in Louisville. It was during this period that Ellen Semple expanded her outlook. Thru frequent conversations with persons prominent in Louisville's cultural life, her mind was awakened to the entire field of contemporary social and economic problems. These conversations were not without importance in causing her decision to continue her studies, leading to a Master's Degree in history at Vassar in 1891.

During this second period at Vassar, Ellen Semple first came upon the recent writings of the prominent German anthropogeographer, Frederick Ratzel. However, it was not until the following summer (1891), when she and her mother toured Europe, that she finally decided to study with Ratzel at Leipzig. In spite of numerous difficulties attending the novelty of a woman studying at a German university, she completed two years of work before she returned to the United States in 1893, enthusiastic over the Ratzel approach to human geography.

NINETEENTH CENTURY ORIGINS FOR HER IDEAS

Human geography has been defined as the science which deals with the adaptation, in the widest sense, of human groups to their natural environment: passive adaptation where these human groups subject themselves with little or no resistance to the action of physical forces; active adaptation when man to a greater or lesser extent modifies his physical landscape.[1] In this definition, the word *adaptation* is the essential part, for numerous controversies have persisted among geographical theorists as to the extent to which man actually adapts his culture and behavior to environmental factors.

With the publication in 1859 of Darwin's theories concerning biological evolution, European geographers were quick to perceive the possibilities which the new[2] concept could provide. The idea that organisms develop from simple to more complex forms due to environmental factors was quickly grasped, and this evolutionary doctrine has exerted fundamental importance to the entire field of human geography. Both Frederich Ratzel and his American disciple, Ellen Churchill Semple, utilized the evolutionary doctrine in their geographical writings to a marked degree.

RATZEL AND HIS INFLUENCE ON SEMPLE

What Ratzel attempted to accomplish was the formation of a systematic method for explaining human development in terms of

[1] Camille Vallaux, "Human Geography," *Encyclopedia of the Social Sciences,* VI, 624-625.

[2] It is not quite true that Darwin was the first to conceive the idea of environmental controls as factors in organic development. Several German scholars, notably Morris Wagner, had worked out a theory for the development of new organic forms thru migration and isolation of groups, a theory which he felt to be the basis of human history. See Carl Sauer, "Ratzel, Frederich," *Encyclopedia of the Social Sciences,* XIII, 120-121; J. Needham, "Evolution," V, 649-655.

its environmental conditioning. His technique was to collect data concerning human habitation under every type of environment, including such factors as location, climate, physiography, natural resources and transportation facilities. Ratzel then proceeded to classify and correlate various human societies living under similar environmental factors so as to determine the extent to which physical surroundings produced patterns of human existence. Ratzel's emphasis on the determinist qualities of environment is illustrated in his analysis of human development:

> Our growth in intelligence and culture, all that we call the progress of civilization, may better be compared with the upward shoot of a plant than with the unconfined flight of a bird; we remain ever bound to the earth and the twig can only grow on the stem. Human nature may raise its head aloft in the pure ether, but its feet must ever rest on the ground and the dust must return to the dust.[3]

It was this dynamic method of explaining how human history thru environmental factors to which Ellen Semple devoted herself so diligently as a result of her contact with Frederich Ratzel. Shortly after her return to America in 1893, she began a project that aimed at applying Ratzel's method to the American scene. This first American monograph in anthropogeography (the term Ratzel applied to his method), entitled "The Anglo Saxons of the Kentucky Mountains; a Study in Anthropogeography"[4] was published in 1901, after several years of painstaking research. Miss Semple utilized extensively the technique of the personal field trip, and she gathered much of her data by actually living with the southern highlanders in their native habitat.

A Beginning in Anthropography

A study of the southern highlanders in Kentucky was chosen for this first essay because Miss Semple desired to explain the character of an Anglo-Saxon group almost completely isolated in the Kentucky mountains for some two hundred years. She endeavored to discover the degree to which the mountain landscape had modified and changed the familiar Anglo-Saxon traditional life. Not only had the mountains prevented immigration into the area, but almost no new ideas had entered the region during that

[3] Frederich Ratzel, *The History of Mankind,* trans. A. J. Butler (London: Macmillan, 1896), 3.

[4] Ellen Semple, "The Anglo Saxons of the Kentucky Mountains: A Study in Anthropogeography," *The Geographical Journal,* XVII (1901), 588-623.

period, causing the population to utilize those traditional modes of living which could be best adapted to their environment.

The Semple methodology in her essay endeavors first to show the physical reasons why the region is isolated. These include the mountain core surrounding the great Appalachian Valley depression, and the fact that there are no passable rivers thru the Cumberland Mountains which might provide a natural entrance. "Man has done little because nature has done so little to make the area accessible."[5]

No longer did this isolated group retain many of the Anglo-Saxon customs. Human dwellings were similar to mountain architecture in Switzerland and Bavaria. Their isolated economy not only produced a pioneer type clothing, but also provided food obtained from the meagre environment. (For example, sugar was obtained from the maple tree, molasses or honey from the bees.) The social organization was also modified. Since no place in the economy was provided for unmarried women, it became almost a necessity for a girl to marry at an early age and then produce large families of ten to fifteen children. The women of the Kentucky mountains worked like slaves doing all the menial labor besides raising the family, while the men idled away their time drinking potent moonshine whisky and engaging in deadly clan feuds. Like the pattern of mountain dwellers in other mountainous communities, Miss Semple found that crime against persons was far greater than crime against property, because while life was cheap, property was scarce.

This eloquently written article might be considered as fine a piece of writing as Ellen Semple produced because at no point did she extend her method to the almost ridiculous extremes that appeared in her later writing. Her method is developed logically, and this small group study became an almost perfect illustration for her geographical concepts, for the Anglo-Saxon in the Kentucky mountains lived in almost complete isolation, subject to almost no cultural contact with the outside world. Ellen Semple, herself expressed this feature:

> The Kentucky mountains present an eloquent region of study for the anthropogeographer of the influence of physical geography, for nowhere else in modern times has that progressive Anglo-Saxon Race been so long and so completely subjected to retarding conditions and at no other time could the ensuing result present so startling a

[5] *Ibid.*, 589.

contrast to the achievement of the same race elsewhere as in the progressive twentieth century.[6]

Unfortunately for the Semple method, too few regions of the world are isolated from the pathways of cultural exchange. Her first book, and for purposes of this article her major work—*American History and Its Geographic Conditions* first published in 1903, attempted to apply the anthropogeographical method to the history of American life.

THE SEMPLE METHOD AND THEORIES CONCERNING AMERICAN HISTORY

To Ellen Semple, American history meant the dynamic story of expansion. This aspect of history had been extremely popular at the beginning of the Twentieth Century. It will be recalled that the Spanish American War had recently been waged; Admiral Thomas Mahan had been working on his studies of sea power expansion; the English geographer Mackinder was working on his theory of spatial relationships and the heartland concept; while Josiah Strong and his contemporaries were actively claiming that it was America's destiny to enlarge her national territory.[7] This Semple view that American history is mainly the expansion from Western Europe to the Atlantic coastal plains of North America, thence westward over the Appalachian "barrier" ultimately reaching the Pacific and then even onward to the islands, was thus not unique. In addition, this expansionist concept fitted snugly into the prevalent evolutionary pattern which supposed that it was a natural law for great nations to expand continuously.

One generalization which Ellen Semple has emphasized is the river theory of American history. Early colonial settlements were made along the banks of rivers with towns developing near river mouths. Advantages to such locations would be obvious, such as: settlers would not be forced to trek distances into the wilderness; the river valleys generally possessed fertile soil; later it became apparent that the river settlement could control the trade of its interior basin or hinterland; and likewise the river became the quickest passage to the interior. The Hudson-Mohawk-Great Lakes waterway thus determined settlement of the Old Northwest Territory, while the St. Lawrence valley determined settlement in south-

[6] *Ibid.*, 622-623.

[7] James C. Malin, "Space and History: Changing Doctrines of Turner and Mackinder," *Agricultural History*, XVIII (April, 1944), 65-74.

ern Canada; the Potomac-Ohio river system pointed toward the heart of the Mississippi valley. The river-lake system of America then determined the avenues of settlement, the chief highways for trade and the location of principal towns. Although the colonists were not aware of geographical principles, they merely adapted themselves to the natural forces of environment.

Ellen Semple's method also utilized the defection theory to explain the American Revolutionary War, and later the Texas War for Independence, the Mexican War and the Civil War. The Ratzel thesis declared that areas located on the periphery of a great nation tend towards "defection," as a result of differences in soil, climate and economic techniques causing different social and political outlooks. Even mere distance is an important causal factor in this defection because of the increased difficulties in administering the areas.[8] The application of such principles to history was a consistent practice of the Semple method.

Since Ellen Semple emphasized the westward expansion of Americans, it would, therefore, seem desirous to discover what methods she applied to analyzing the American frontier. Frederick Jackson Turner had earlier defined the frontier as the "meeting point between savagery and civilization," and as the area that "lies on the hither edge of free land."[9] Turner considered the frontier to be a process that continued right across the American continent thru various stages depending on the particular environment. To Ellen Semple,

> "the westward moving frontier is beyond all doubt the most interesting subject in American history. Here is written the fullness of American energy, its daring resourcefulness and ambition; here the rate of national growth registers itself in more telling figures than mere statistics of population; here with rifle, axe, and plough, with canoe, bullskin boat, pack horse, and covered wagon, the man of backwoods and plain shapes the national dream of empire into the sturdy stuff of trading post, ranch and farm."

The Semple concept of the frontier was a zone of assimilation and comingling where the European immigrants became primitive backwoodsmen and where Englishmen came into contact with

[8] Ellen C. Semple, *American History and its Geographic Conditions,* revised in collaboration with the author by C. F. Jones (Boston: Houghton, Mifflin Co., 1933), 55. So far as this paper is concerned, no real difference is discernible between the original edition published in 1903 and the revised edition.

[9] F. J. Turner, "The Significance of the Frontier in American History," *The Turner Thesis Concerning the Role of the Frontier in American History* (Boston: D. C. Heath & Co., 1949), 2.

French, Spanish or Indian groups.[10] American expansion, such as the purchase of the Louisiana Territory, was merely an inevitable climax to a series of economic forces that centered about the importance of controlling the entire Mississippi Valley as a commercial outlet for the Trans-Appalachian region.[11] Similarly, when large groups of Americans had moved into Texas by the 1830's, it became inevitable that their numbers and aggressive spirit would demand separation from Mexico.[12] This doctrine of inevitability permeates the Semple methodology. American settlements and overland trail in the west were determined by the river valleys and mountain passes. Predominate economic occupations were determined by climatic and soil factors as well as the natural resources. Regions possessing mountainous or arid qualities discouraged settlement. Those persons who chose to reside in such districts were compelled to adjust to these extreme environments or else perish.

Even the character of the western frontiersman was influenced by his environment. As such an example, she wrote:

> Everywhere one notices a certain largeness of view in the ordinary Westerner. Even when uncultured and crude from lack of opportunity, he never takes a contracted view of things. He measures things with a big yardstick. The nomadic instinct is still in him, handed down by his emigrant forebears. Wherever he is found he has always come there from somewhere else. Hence he is never provincial, and he is intensely, broadly American.[13]

Even the existence of abundant space in the United States is credited with providing the individual with "powerful initiative" and the encouragement of the democratic spirit. The mere size of the national domain has kept "classes and masses on a nearly equal footing by equality of opportunity."[14]

The building of railroads in the west, in spite of sparsity of population, was due to economic requirements for connecting the two distant coasts. This was, then, environmental influence of both size and location. Rivers were factors in determining the location and growth of cities. St. Louis, for example, owes her excellent location to the fact that the depth of the Mississippi River just below the city is at least six feet deep, while above the city it is only three

[10] Semple, *American History and its Geographic Conditions*, 182; 101-108.
[11] *Ibid.*, 109-110.
[12] *Ibid.*, 173-181; 225.
[13] *Ibid.*, 246.
[14] *Ibid.*, 248.

to five feet deep, and hence this site provides an ideal point for reshipment of goods.

The canal era was also a determining factor in American urban history. Miss Semple credited the Erie Canal, for instance, with shaping the destiny of New York City. It aided the rapid advance of that city to become the national port of entry, and through its control of a vast hinterland, New York City became the center for America's commerce.[15] Canals augmented the rivers in opening the west to settlement and trade.

The Semple analysis for an understanding of the Civil War is made in terms of climate and soil:

> The question of slavery in the United States was primarily a question of climate and soil, a question of rich alluvial valley and fertile coastal plain with a warm moist enervating climate, versus rough mountain upland and glaciated prairie or coast with a colder, harsher, but more bracing climate. The South, having geographical conditions favorable to the plantation which alone made slave labor profitable, upheld the institution both on economic and moral grounds.[16]

Miss Semple then contended that these environmental forces which encouraged the slavery institution, caused the sectional controversy which culminated in the Civil War. Those areas, even in the south, such as the mountain districts which could not utilize slavery, became abolitionist and opposed secession in 1861. The results of the Civil War with the preservation of the Union, according to Miss Semple's interpretation, meant the continued progress of territorial evolution from smaller to larger size:

> From the standpoint of political geography, therefore, the disruption of the Union would have been a retrograde step, just as the defeat of the Transvaal meant an advance even for the Transvaal itself, because of its absorption into a larger territorial body.[17]

Immigration into the American West was caused, according to Ellen Semple, by the abundance of cheap land. The south received few immigrants because of the labor competition of the Negro.[18] Aliens in the southwestern states are mostly Mexicans who have crossed the border seeking economic improvement. The question of Oriental propinquity to the Pacific Coast states is handled by Miss Semple's method in an intriguing manner. Until 1869, when the transcontinental railroad was completed, China was closer to California than was the Mississippi river in terms of money, time

[15] *Ibid.*, 271.
[16] *Ibid.*, 282.
[17] *Ibid.*, 309.
[18] *Ibid.*, 313.

and comfort. Pacific Ocean travel was easy in contrast to the hazardous journey over the mountains and deserts of western America. However, artificial barriers in the form of immigration restrictions limited the natural flow of Orientals to America.

Railroad building in America, according to the Semple environmental thesis, showed the tremendous extent to which transportation had followed nature's paths. Specific crops and industries that had been developed in particular localities because of their unique advantages, required efficient and rapid transportation network to import raw materials and necessary consumers' goods, as well as to send out from the region its local products. Thus, in a country having considerable geographical specialization, the building of railroads progressed rapidly. Miss Semple attempted to analyze railroads in terms of physiographic influences as determinates for routes and for termini. These would include the Gila River depression, the Salt Lake Basin and the Sierra Madre Plateau.

American expansion into the Pacific and the Gulf of Mexico was actually a political geographic process. Islands in the Caribbean fell into American influence as a result of the "geographic law of gravity," which stipulates: "Islands are detached areas physically and are detachable areas politically. They tend to fall to the nearest political domain."[19]

A Criticism of These Methods

These have been Miss Semple's principal theories regarding American history. Her general principles are subject to numerous exceptions and one may often wonder as to whether the exceptions do not often nullify the pronounced generalization. The defection theory of regions located on the perimeter tending toward secession has not proven itself in regards to numerous colonial possessions. In applying the "island gravitation law" to show that islands tend toward continental control, Miss Semple ignored the exceptions of Britain, Japan and other islands which have remained staunchly independent.

The Semple method of emphasizing environmental determinism tends toward constant over-simplification. In attempting to stress the role of rivers in settling eastern America, Ellen Semple almost ignored the overland frontiersmen. She was unaware apparently of cultural factors as influences in American history; in

[19] *Ibid.*, 408.

fact one gains the impression that there is no cultural borrowing from one environment to another. Nor does Miss Semple's methodology take into account individual or group intelligence and ingenuity in the total pattern of history. Mankind could be all apes and still lead the same sort of life if environment is the chief factor that controls life. The possibilist method of human geography holds that the environment provides a varied number of possibilities for man to choose from, and man, therefore, makes the choice which seems best from the point of view of his particular cultural level.[20] This "possibilist" school of geographers has gained wide acceptance from American geographers as disapproval was bestowed upon the Ratzel-Semple environmental-determinist method for purposes of understanding human history.

Miss Semple's acceptance of the precepts of inevitable evolution and political expansion for a state can also be fallacious. She could explain, without too much difficulty, the geographical basis for a state's rise to world power thru continental expansion, etc., but unfortunately, the world's history is not filled with accounts of continuous expansion. The geographical determinist finds the task difficult, when using the same environment, to explain why a state declines in the traditional rise and fall of civilizations that have occurred throughout history. In brief, the Semple method has only limited utility and must be used with extreme caution.

Ellen Semple viewed the American frontier, not as a process (as did her contemporary, Frederick Jackson Turner) but rather as a series of environments, each of which influences the settler. Without emphasizing the point, Miss Semple was in reality a sectionalist. Yet she did not stress the importance of sections except in terms of their physical determinism. Natural resources were not adequately stressed in her analysis of American history's geographic conditions. The influence of such minerals as iron, copper, lead, coal, etc., on the economic history of various regions and cities is of real geographic significance.

Not only are her determinist methodology and theory naively inadequate for explaining human development, but Miss Semple displayed strong racist tendencies and beliefs. These racist beliefs were quite common among the Anglo-Saxon and German intelligentsia during the early Twentieth Century. She believed that Latin

[20] R. E. Dickenson and O. J. R. Howarth, *The Making of Geography* (Oxford: The Clarendon Press, 1933), 206ff.

racial groups were incapable of producing great leadership necessary for a high civilization.[21] Similarly Miss Semple, commenting on the racial background of the American frontiersman, declared:

> . . . . In this advance from ocean to ocean geographic conditions, in the cumulative effects of direct and indirect operation, became factors so strong that just for the sturdy energy of the Anglo-Saxon race they became determinants. A less vigorous people would hardly have responded to the educative influences of this peculiar environment.[22]

These racial views, emphasizing the superiority of the Anglo-Saxon-Teutonic "race," undoubtedly owed their influence to Ellen Semple's training under Ratzel.

Ellen Semple and Frederick Jackson Turner: A Comparison of Ideas on the American Frontier

In any comparison between the environmentalism as emphasized by Ellen Semple and the environmentalism of Frederick Jackson Turner, one basic difference is paramount. Whereas Miss Semple postulated that environment was the basic determinant in a society's historical development, Turner implied that environment established definite limitations and set up certain possibilities for men as their cultural needs and desires make necessary. In his frontier hypothesis, the pioneers who entered a virgin frontier region were, at first, forced to live in the most primitive fashion. The frontiersman was approaching total adaptation to his environment. However, as soon as the pioneer became settled in his new community, he was likely to adapt his previous cultural traditions, as far as feasible, to the new landscape of the frontier.[23] In this way, the pioneer was able to utilize those "possibilities" of the frontier to suit his desired cultural level. Thus, Turner pointed to the recurring pattern of developmental stages in each frontier of western expansion. Ellen Semple has no hypothesis to explain this process of recurring expansion patterns—except her theory of environmental determinism, which does not prove valid in any society except those isolated or containing only primitive cultural groups.

[21] Semple, *American History and its Geographic Conditions*, 239.

[22] *Ibid.*, p. 228. Another illustration of Miss Semple's racial views is found on p. 232, where she considered the rejuvenation of the "English race" on the American continent.

[23] See Ray A. Billington, *Westward Expansion* (New York: The Macmillan Co., 1950), 3. Billington here explains the Turner frontier concept as follows: "the region whose social conditions resulted from the application of older institutions and ideas to the transforming influences of free land."

Despite its inadequacies, the Ellen Semple environmentalist methodology has served to provide substantial meaning to the myriads of geographic facts. It was Ellen Semple who forcefully brought home to the American social scientists of all departmental disciplines that geographic forces were of vital significance in appraising social and economic growth.

Ellen Churchill Semple's environmentalist doctrine when applied to the American frontier contained persuasive force. Her eloquent prose style was an artistic achievement for scholarly writing. The enormous influence which her methodology had on American historical writing can be gleaned from the following paragraph in which she explained her concept of the frontier in American history:

> A country in the germ, like the human embryo, passes rapidly through all the lower phases of development before it evolves to the type of the parent stock. Such was the history of colonial America. The settlers who came to people this country brought their best capital in the elements of European civilization. As exponents of this civilization they represented the forces of heredity. What transformed them was their environment, always the most potent factor for a young growth. The wide surrounding wilderness necessitated a return to a primitive type of living in order to cope with primitive conditions, but it generated a new order of adaptability, which is the strongest guarantee of a higher development. The men who learned the law of the wilderness gained the secret of its mastery. For the products of English garden and farm they accepted the savage commissariat of game, maize, and berries; for the busy London shops, Indian barter; for carriage and cart on well-built road, the highway of the streams with swift moving canoe or the blazed trail through forest and glade for the noiseless tread of moccasined feet.[24]

[24] Semple, *American History and its Geographic Conditions*, 335.

STATE COORDINATORS OF NATIONAL COUNCIL OF GEOGRAPHY TEACHERS

MAMIE L. ANDERZHON
Director of State Coordinators

The NCGT State Coordinators are officers of the NCGT who are the workers at the "grass roots" in each state. The 1935 Report of State Coordinators carried a variety of geographic activities initiated by the State Coordinators, State Councils, and local councils. Each State Coordinator has a copy of the State Coordinators Report. Additional copies may be had from the Director of State Coordinators. The NCGT 1953-1954 Coordinators are:

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Mildred Danklefsen, Western Reserve University, Cleveland 6, Ohio (currently Innswood Estate, Ltd., Spanish Town, Jamaica, B.W.I.)
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Marie Harrison, East Tennessee State College, Johnson City
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Sidman P. Poole, University of Virginia, Charlottesville
Robert Funderburk, Central Washington College, Ellensburg
Robert L. Britton, Marshall College, Huntington, West Virginia
Mary Jo Read, Wisconsin State Teachers College, Milwaukee
Wyoming, Vermont, Idaho and Delaware do not have coordinators.

These state coordinators are to be congratulated on the important work they are doing in each state.

GEOGRAPHICAL PUBLICATIONS

Educators Guide to Free Films, Thirteen Annual Edition. Compiled and edited by Mary F. Horkheimer, John W. Deffor and John Guy Fowlkes. Educators Progress Service, Randolph, Wisconsin, 1953. 516 pages. **$6.00.**

The 1953 edition of the *Educators Guide to Free Films,* thirteenth in a series of annual volumes devoted to free films, has grown in size and usefulness. This catalog of free films comprises an annotated list of 2,574 films (562 of which were not listed in the previous edition) which are loaned to schools. It calls attention to films which might be overlooked by the busy teacher. The subjects covered by the films are of special interest to members of the teaching profession and to students in many kinds of subjects. Many of the films listed deal with important aspects of geography and when properly used will help to make our world more intelligible to young people. This carefully selected catalog of films will be of invaluable assistance in the planning of education programs by school or community groups.

Each film is listed by title, size, number of reels, dates of release, length, and the contents are briefly discussed. A title index, source index, cross index, subject classification and an indication of the probable availability of the film are included. For finger-tip reference each index is identified by color of paper.

Anyone interested in the use of films as an aid to instruction will be attracted to the excellent article by Dean John Guy Fowlkes entitled "The Significance of Films in Curriculum Improvement."

The guide is extremely complete and brings to the busy teacher an up-to-date organized file of information on a wealth of valuable films suitable for classroom use. This standard guide to free films is an indispensable aid for schools using free films and is well worth the $6.00 it costs.

MARY VIOLA PHILLIPS

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R. W. Eschmeyer. **Freddy Fox Squirrel** and **Tommy Trout.** Fisherman Press, Inc., Oxford, Ohio. **$.50** paper bound, **$1.50** clothbound.

Both books are written for third or fourth grade readers. The sentences are short and the vocabulary is controlled with only a few exceptions. The clever illustrations which are executed in two colors are quite numerous and meaningful and add much to the attractiveness of both books. Altho both volumes are well suited for the lower middle

grades in so far as readability is concerned, the information contained in them would also appeal to students in higher grades who are poor readers. The interest level could probably be scored from the fourth grade thru the eighth grade depending on the reading ability of the pupil.

Freddy Fox Squirrel is as the author states a "true-to-life story of a fox squirrel and how he lived." In this presentation of a seemingly routine subject, the writer has brought in much valuable information on conservation, such as the dependence of wild life on natural vegetation, the contributions of wild life to the spread of vegetation, and the merits of the hunting season in regard to wild life. Some of this material is stated definitely, while some is to be gained by inference.

Tommy Trout is the "true-to-life story of a brook trout and how he lived." This is definitely the better of the two books because the author has woven into his story effectively the disastrous consequences of human carelessness on our forests which in turn effect the wild life and waters of the area. The dominant tone of the book is conservation and the necessity of the education of the general public to further the program of conservation.

Both books are well written, well illustrated, and contain many accurate facts. They are recommended for children eight to ten years of age.

EMILY H. BAKER

St. Louis, Missouri

Chart on **Geographical Terms, 64″ × 44″**; Chart on **Mathematical Geography Terms and Geographical Terms, 44″ × 58″**. Denoyer Geppert, Chicago, 1953.

The larger chart is a colored landscape with more than a 100 named features. Below the chart is a glossary of 154 terms, some of which are not pictured on the chart.

The smaller chart pictures two hemispheres, North Atlantic centered, about 16 inches in diameter. One globe is yellow with some terms of mathematical geography lettered in place. Some examples are: tropics, meridians, parallel latitude, north pole. The other globe is colored pink for all land areas and blue for water areas. Land and water features are named to illustrate such terms as continent, ocean, country, peninsula and others. A much smaller hemisphere, Australia centered, appears between the two larger hemispheres. The lower two-thirds of this chart has a smaller reproduction of the landscape shown on the chart of Geographical Terms as well as the glossary mentioned above.

It is true that most atlases and many wall maps are lacking in legends that make map reading understandable. It is probable that these charts are an attempt to remedy that situation.

The first fleeting impression of the charts is favorable. The colors are bright and solid and have carrying power. Many of the terms are depicted clearly, such as: delta, ridge, divide, peninsula, volcano, reservoir, dam.

A closer examination of the details on the charts reveals some obvious limitations in the attempt to supply so much information on such limited space. Many items are not clear. For example, the word *waves* appears on a calm blue sea surface; the word *atoll* appears in the water rather than on the feature itself. The names of many features are lettered somewhat removed from the item to be identified.

Some parts of the vast panorama fail to give the feeling of perspective and size. The canal locks appear to occupy the entire width of the main river. The size of the oasis is as small as a single field in the foreground yet the very irrigation canals are as wide as the main river channel. The desert is shown as having one sand dune and two saguara cacti. It is questionable to show these two trademarks as common desert landscape. The one iceberg blends with the clouds on the horizon. Details of distant villages

and towns give the child no idea of what is there. One questions if icebergs ever get within sight of atolls which form only in warmer waters.

Altho the glossary defines terms, the vocabulary used may create additional problems in many instances. It is also somewhat confusion to define by contrast in size such terms as bay, gulf, arm, forest, woods, timber. All of these lists can be read only at close range.

No doubt, many teachers will find this material a helpful tool. Because of the various limitations of scale, perspective, grade level and arrangement of details, the teacher will need to help guide children in the use and interpretation of the illustrations and content.

M. MELVINA SVEC

State University Teachers College
Oswego, New York

John L. Myres. **Geographical History in Greek Lands.** Oxford University Press, New York, 1953. ix and 381 pages with index and 12 plates. **$7.00.**

In the collection of essays recently published by Professor John L. Myres, all are worthy the serious attention of teachers of geography everywhere, but some are to be recommended especially. The essay "Ancient Geography in Modern Education" should be read by all, because it clearly sets forth a point of view, geography-wise, that is seldom even heard of in America. Attention to Professor Myres's "point of view" will help in reading the other essays; it will also give the reader means for correcting, modifying or strengthening his own.

Some of the essays are not strictly for the professional geographer, but there is a gain to the reader in that they are not. Professor Myres's essay on the cause of the rise and fall in the population of the Ancient World was published originally in the *Eugenics Review*. It gains in clarity because it is, in a sense, non-professional. The reader becomes aware that his own geographical predilections are being changed by Professor Myres's urbanity. The essay brings ideas to bear on the problem of reconstructing the population of the Ancient World. It precedes the geographical problem in theory, of course, but it may, also of course, be worked out simultaneously with it. Professor Myres gives hints both ways in the course of the essay.

"The Marmara Region" is a model for the treatment of Regional Geography, which too often leaves out the historical. The careful reader will note that the essay does *not* fall into the "persistent influence" error, even tho it may seem to do so.

The foregoing sample of what Prof. Myres has done will, it is hoped, make the reader want to read all the essays in the collection. If he does so, he will be rewarded with freshness of ideas, originality of approach, and his conclusion will be that as pickles often make a feast palatable, so the essays make palatable the ordinary geographical fare of the American reader.

STANLEY D. DODGE

University of Michigan

Goode's World Atlas, Ninth Edition (edited by Edward B. Espenshade). Rand McNally and Company, Chicago, Ill., 1953. 272 pages. **$6.50.**

Altho the ninth edition of *Goode's School Atlas* appears under a new title, it is still the familiar "school atlas." Revision of type and a superior printing process give the opening pages and many of the maps a sharper and more attractive appearance. A matching topographic map and aerial photograph form functional end-sheets. Many will like the diagram of "Sun and Planets" and the restoration of "Earth, Sun and Moon."

The major changes are in the excellent sixteen pages of Special Maps of the United

States and Canada which should be welcomed by teachers and students of Anglo-American geography. One map covering the United States and Southern Canada replaces a map for each country on such subjects as Precipitation, Population and Transportation. Additions include a section of urban maps of the two countries and dot maps showing distribution in the United States of selected crops and animals based on 1947-1951 data. Maps familiar to geographers have been brought together for the first time: U.S.D.A., "Major Land Uses" and "Generalized Types of Farming"; Raisz, "Physiography" on which lithography and structure have been superimposed by color; Küchler, "Natural Vegetation"; Thornthwaite, "Moisture Regions."

Aside from the above valuable changes and necessary name and boundary revisions, the atlas remains essentially as it was in the eighth edition. It is to be hoped that the next edition will see further improvement thru inclusion for other sections of the world of Special Maps similar to those for Anglo-America.

ELIZABETH EISELEN

Wellesley College

Eloise Jarvis McGraw. **Mara: Daughter of the Nile.** Coward-McCann, Inc., 1953. viii and 279 pages. $3.00.

This historical novel is a popularly written tale of a slave girl employed as a spy at the royal palace during the time of Hatshepsut and Thutmose. A description of Egyptian court life unfolds as the story progresses. The novel is well written and maintains interest, but it contains little for readers who are interested in Egyptian geography or the correlation of geography and history.

EARL B. SHAW

State Teachers College, Worcester

Alma Houston. **Nuki.** J. B. Lippincott, Co., New York. 151 pages, 1953. Price: $2.65.

At last a good story has been written about the Canadian Eskimos, in a manner that children 8 to 12 years will enjoy, and by someone who knows the Eskimos as they really are. Alma Houston has accompanied her husband, James, who illustrates the book with excellent drawings, when they visited Eskimo camps in the Hudson Bay region. James Houston is the Arctic representative of the Canadian Handicraft Guild, and he has done a great deal of good work in encouraging the Eskimos, in their native handicrafts and in collecting their carving art for sale in southern Canada and the United States. These two artists, thru their many summer and winter visits, have come to know and appreciate the problems and the peaceful way of life of these happy, friendly inhabitants of Arctic Canada.

The story of "Nuki" is the story of a year in the life of an 11-year-old Eskimo boy on southern Baffin Island. Pleasantly and simply written the story describes the adventures of Nuki and his family in both winter and summer. In addition to interesting chapters (my 7-year old boy demanded a whole chapter every evening, and both father and son enjoyed them!), Mrs. Houston has woven in a great many facts and accurate description of the Eskimos, their environment and their daily and seasonal activities. Teachers will learn a great deal about such things as snow-house building, seal-hunting, folklore, whales, polar bears and the inner sensitive feelings of the Eskimos. Youngsters will be thrilled with the stories and will absorb a great deal of knowledge about Arctic Canada and the Eskimo inhabitants. With so much inaccurate, semi-fiction being written about the North by casual visitors it is a real pleasure to find a new book which happily combines education with entertainment.

J. LEWIS ROBINSON

University of British Columbia

Elsa Jane Werner. **The Golden Geography.** Simon and Schuster, New York, 1952. 96 pages with illustrations and index. $3.95.

The subtitle to this book, "A Child's Introduction to the World," is a more appropriate title for the text. The author of this review is frequently asked to recommend a good, illustrated book in geography which might serve as a gift for an elementary school child; *The Golden Geography* is an excellent answer to such questions. The text deals with earth-man relationships in a logical manner. Basic concepts of maps, globes and latitude and longitude and time are presented with colorful illustrations drawn by the co-author artist, Cornelius DeWitt. Life in various parts of the world is described with appropriate text and illustration. The child is exposed to the problems of understanding climate and weather, the wind belts, the vertical as well as horizontal climatic belts. Systematic, regional and urban geography are approached.

Fourth grade students should have no difficulty in reading the book and younger children will enjoy hearing the text read. Also, an adult would enjoy the profusion of illustrations and be impressed by such diagrams as the location of Paris on the Seine, irrigation ditches in the Nile Valley, and the sketch of Stockholm. For many adults, the book will bring back to mind information they have long forgotten.

There are, as one might expect in an elementary treatment, occasional generalizations that, to the geography teacher, fringe on errors, but for the most part, these can be excused. The page size is large, 10″ × 13″, with large type in double columns and the index is quite adequate.

BENJAMIN MOULTON

Butler University

BOOKS AND PAMPHLETS RECEIVED

Educators Guide to Free Films. Educators Progress Service, Randolph, Wisconsin, 1953. 516 pages with indices. $6.00.

Israel Cohen. **Travels in Jewry.** E. P. Dutton and Co., New York, 1953. 372 pages with index. $5.00.

The Ports of Stockton and Sacramento, California. No. 32. U. S. Government Printing Office, Washington 25, D.C., 1953. xiii and 140 pages with maps. $1.00.

Transportation Lines on the Mississippi River System and the Gulf Intracoastal Waterway, 1953. U. S. Government Printing Office, Washington 25, D.C., 1953. xxi and 262 pages. $1.25.

Humpty Dumpty's Magazine for Little Children. Parents' Magazine Press, Inc., Bergenfield, New Jersey. 130 pages with illustrations. $0.35.

Educator's Guide to Free Slidefilms. Fifth Annual Edition, 1953. Educator's Progress Service, Randolph, Wisconsin, 1953. v and 185 pages with indices. $6.00.

F. K. Hare. **The Restless Atmosphere.** Longmans, Green and Co., New York, 1953. viii and 192 pages with maps, diagrams and index. Text edition, $1.80; Trade Edition, $2.40.

Alma Houston. **Nuki.** J. B. Lippincott Company, New York, 1953. 151 pages with illustrations. $2.65.

Leonard Hadlow. **Climate, Vegetation and Man.** Philosophical Library, New York, 1953. 288 pages with maps, illustrations and index. $4.75.

United States Atlases. Volume 2. Library of Congress, Washington, D.C., 1953. xiii and 301 pages. $2.50.

Howard F. Cline. **The United States and Mexico.** Harvard University Press, Cambridge, Massachusetts, 1953, xvi and 452 pages with index. $6.00.

Edward B. Espenshade, Jr., Editor. **Goode's World Atlas.** Rand McNally & Company, Chicago, 1953. xv and 272 pages with index. $6.50.

Gordon Cooper. **Along the Great Rivers.** Philosophical Library, New York, 1953. 159 pages with photos and appendix. $4.75.

Pierre Gourou. **The Tropical World:** Its Social and Economic Conditions and its Future Status. Longmans, Green and Co., New York, 1953. xii and 156 pages with maps, illustrations and index. $3.50.

Hester Hawkes, **Ning's Pony.** Coward-McCann, Inc., New York, 1953. 28 pages with illustrations. $2.00.

Regina Tor. **Getting to Know Korea.** Coward-McCann, Inc., New York, 1953. 47 pages with illustrations and index. $2.25.

Hans Cloos. **Conversation with the Earth.** Alfred A. Knopf, Inc., New York, 1953. xiv and 413 pages with bibliography, index, lii plates and 26 figures and tables. $5.75.

Rural Leadership and Service: A Study of the District Superintendency. New York State Education Department, Albany, 1951. xii and 76 pages with charts.

James E. Collier. **Geography of the Northern Ozark Border Region in Missouri.** University of Missouri, Columbia, 1953. 105 pages with maps and index. $2.50.

Horkheimer, Cody and Fowlkes. **Elementary Teachers Guide to Free Curriculum Materials,** 10th Edition. Educators Progress Service, Randolph, Wisconsin, 1953. 334 pages with index. $4.50.

Charles Wagley. **Amazon Town:** A Study of Man in the Tropics. The Macmillan Company, New York, 1953. xi and 305 pages with index and illustrations. $5.00.

H. W:son Ahlmann. **Glacier Variations and Climatic Fluctuations.** The American Geographical Society, New York, 1953. v and 51 pages with maps and four plates. $2.50.

Political Map of India. Swastik Geographical Publishing Bureau, Girgaon, Bombay 4.

Countries Around Indian Ocean (map) Neighbours of India Series No. 2. Swastik Geographical Publishing Bureau, Swadeshi Mills Estate, Girgaum, Bombay 4.

Caribbean (7 wall charts). Educational Production, Ltd., London.

Air Age Maps (4 wall charts). Educational Productions, Ltd., London.

Pakistan. "You and the Commonwealth" Series. Educational Production, Ltd., London, 1949. 32 pages with illustrations. 2/6 plus 6d postage.

Anthony Smith. **Blind White Fish in Persia.** E. P. Dutton, New York, 1953. 256 pages with 38 illustrations. $3.75.

Robert Gibbings. **Coming Down the Seine.** E. P. Dutton, New York, 1953. 217 pages. $4.50.

Weaver and Lukermann. **World Resource Statistics.** Burgess Publishing Company, Minneapolis, 1953. $4.00. 166 pages with two maps.

G. W. Tyrrell. **The Earth and Its Mysteries.** British Book Centre, New York, 1953. xii and 278 pages with figures, 14 plates and index. $3.25.

George H. T. Kimble. The Way of the World. George Grady Press, New York, 1953. x and 123 pages. $2.50.

Alexander Reid. **The Young Traveler in France.** E. P. Dutton and Co., New York, 1953. 224 pages with photographs and map, index and glossary. $3.00.

L. Dudley Stamp. **An Intermediate Commercial Geography,** Part I: Commodities and World Trade, The University Geographical Series. Longmans, Green and Co., New York, 1953. viii and 288 pages with illustrations and index. $3.25.

Eloise Jarvis McGraw, **Mara Daughter of the Nile.** Coward-McCann, Inc., New York, 1953. viii and 279 pages. $3.00.

Lucille Mulcahy. **Dark Arrow.** Coward-McCann, Inc., New York, 1953. 209 pages with illustrations. $2.50.

Rutherford G. Montgomery. **White Mountaineer.** Little, Brown and Co., Boston, 1953. 177 pages with illustrations. $2.75.

Eva Knox Evans. **Why We Live Where We Live.** Little, Brown and Co., Boston, 1953. 151 pages with illustrations. $3.00.